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Illinois Commerce Commission
527 E Capitol Ave
Springfield, IL 62701

To: Illinois Commerce Commission

RE: Energy Storage Program Framework Comments

The Union of Concerned Scientists has been working on equitable energy storage policies since 2018, including developing principles of equitable energy storage policy design. UCS is writing to support a framework for identifying and assessing energy storage costs and benefits that is rooted in an equity lens.

The framework should prioritize equity dimensions of energy storage such as affordability, resilience, access, employment opportunity, and environmental justice.[1] The framework should center the benefits of energy storage deployment such as reducing emissions, improving resilience, local economic development, accelerating renewable energy, protecting consumers, and ensuring participation. In this way, the energy storage program's framework would ensure energy storage projects to be intentionally sited in ways that maximizes benefits to communities: reducing local air pollution, demand charges, and outages.

Equity in energy affordability can be measured by the benefit storage projects could have on reducing energy burdens and prioritizing projects that can reduce energy burdens. Equity in resilience could mean assessing and prioritizing benefits for areas that have more critical needs for a service, such as elderly populations or medical services. It could also mean assessing and prioritizing benefits for community resilience for areas that have lower levels of community resilience. Equitable clean energy access and opportunity could focus on how storage deployment could benefit equitable adoption rates for behind-the-meter technologies such as photovoltaic solar and battery storage or supporting communities considering or investing in community solar by pairing storage. A storage program that prioritizes environmental justice in its framework should focus on assessing and facilitating increases to public health and decreases for pollution, particularly for overburdened communities.

[1] Will McNamara, Howard Passell, Marisa Montes, Robert Jeffers, Imre Gyuk. (2022). Seeking energy equity through energy storage. The Electricity Journal. https://www.sciencedirect.com/science/article/pii/S1040619021001548

The framework of an equitable energy storage policy should also include the following principles[2]:

- Design energy storage applications centered around outcomes that benefit communities, such as: (Put another way, identified and measured benefits of energy storage deployment must include):
    - Reducing local emissions;
    - Generating community wealth;
    - Replacing fossil fuel peakers/reducing harmful emissions; and
    - Improving resilience in specific communities;
- Actively identify and address barriers to participation among low- income and otherwise disadvantaged individuals and communities;
- Combine different policy mechanisms to achieve intended outcomes—including carve-outs, incentives, and financing mechanisms aimed at ensuring that underserved communities share in the benefits of storage deployment—and ensure these policies are aligned with other clean energy incentives for those communities;
- Include an equity focus within efforts to improve resilience. Ensure that the specific needs and abilities of more vulnerable populations are reflected in grid resilience planning processes.
- Ensure that all consumers benefit from energy storage projects, emphasizing benefits to low-income consumers and enabling community owner- ship of projects.

Additionally, below are some thoughts on how to incorporate equity into the framework of identifying and measuring potential costs and benefits for energy storage deployment as well as barriers.

1. avoided cost and deferred investments in generation, transmission, and distribution facilities;

The framework should ensure that relative costs (economic, public health, and climate costs) of energy storage or energy storage plus solar compared to fossil fuel infrastructure, when fossil fuel projects are being considered.

2. lower peak power costs and reduced capacity costs;

The framework should prioritize reduced costs for ratepayers and particularly reductions in energy burdens for environmental justice communities communities. The framework should also ensure that energy storage deployment prioritizes community facilities and affordable housing for energy storage citing. Battery storage that is discharged at times of high on-site electricity demand can lower peak usage and, therefore, reduce costly demand charges (Milford et al. 2018). These savings directly reduce the operating costs of community-serving facilities, and in affordable housing, the savings could be passed along to low-income residents who stand to benefit the most.

[2] Union of Concerned Scientists. (2019, April 1). Principles of Equitable Policy Design for Energy Storage. Retrieved May 25, 2021, from https://ucsusa.org/sites/default/files/attach/2019/05/equitable-policy-storage-principles.pdf.

3. reduced costs for emergency power supplies during outages;

The framework could ensure that projects focusing on community level microgrids or resiliency hubs are incentivized and that there are opportunities for creating community centers for disasters or outages equipped with storage.

4. reduced greenhouse gas emissions and other criteria air pollutants;

   One of the biggest ways this energy storage framework can ensure community benefits and improvements for environmental justice issues is by leveraging energy storage to eliminate fossil fuel peaker plants. Energy storage can improve public health outcomes if regulators design a progam that facilitates the replacement of dirty peaker plants. The framework can help prioritize projects designed to benefit underserved communities directly through reduced air pollution or improved resiliency and make sure that projects that reduce fossil fuel demand during peak periods are prioritized.

   The framework should focus on optimizing public health benefits from the deployment and dispatch of energy storage technologies Evaluating where the new energy resources should be located, as well as when they are used, can reduce pollution in underserved communities, particularly by avoiding the use of peakers.

5. increased grid hosting capacity of renewable energy generators that produce energy on an intermittent basis;

   In addition to identifying benefits to renewable energy integration and development, the framework can support equity of renewable energy benefits. To spread the benefits of clean energy more widely, community solar and storage should be designed to include multifamily homes and critical community centers. Energy storage can also be used with utility demand response programs, which balance electricity customer demand with power supply, to better align the more variable wind and solar supply with electricity demand. Projects can be designed to ensure that energy is stored when solar and wind power are at their peak and discharged to users when demand for electricity is high, and the framework should make sure to support the prioritization of energy storage projects that are paired with or charged by renewable energy. The benefits of energy storage vary greatly depending on the energy source they are charged by, so the framework should focus on the benefits that come from charging batteries with renewable energy.

increased economic development

- The framework can focus on community wealth building opportunities as a benefit to help ensure a significant portion of storage projects are not owned by utilities and help encourage community ownership.

Finally, stakeholder engagement and public participation must be a key part of this framework. The framework should ensure projects have transparent, inclusive, and accessible processes for public input and stakeholder engagement. These processes should include

permanent advisory groups, temporary working groups or task forces, and longer periods for public input.

Cost-benefit studies to evaluate storage potential and pilot project should explicitly evaluate the potential for deploying storage in underserved communities and quantify the economic, environmental, and resilience benefits of storage. Similarly, at least a portion of pilot projects should be required to deliver benefits to underserved communities. In both cases, processes to assess these questions or develop projects must include comprehensive and transparent stakeholder engagement and targeted outreach to affected communities.

Please see attached to the email as well UCS resources on equitable energy storage.

Sincerely,

Meghan Hassett
Midwest Clean Energy Advocate
Union of Concerned Scientists